

QUA·RAE

HERE IS NEWS OF... RADIO ASSOCIATION OF ERIE, INC.

VOL. III No. 5

MAY 1972

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THIS ISSUE - TECH PRINT NO. 1, Electronic
TR Switch/CW Sidetone Monitor

ERIE'S FINEST AMATEUR RADIO NEWSBULLETIN

The Radio Association of Erie, Inc.
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Erie, Pennsylvania 16512

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L. H. JETER W3HTD
434 VERMONT AVE.
ERIE, PA. 16505

THIS MONTH - CW. Next MONTH - MOBILE. DEADLINE MAY 15. JULY - EMERGENCY OPN.

BUSINESS MEETING MINUTES April 6, 1972

The meeting was called to order at 8:07 PM by K3QAY.

Officers present: K3QAY, WA3HSR, and WA3EAY.

Directors present: W3SN, K3VLP, WA3HDK, WA3MAU.

A round of introductions was then held.

The Secretary's minutes were approved as corrected.

The Treasurer's report indicated a balance of \$133.43 with all bills paid. WA3MAU moved that all new bills be paid. This passed without discussion.

CORRESPONDENCE:

- 1) Several requests for more information on the upcoming auction.
- 2) Two new 1972 memberships.
- 3) The HAMMER from NCARC and a CB newsbulletin.

COMMITTEE REPORTS:

QUA-RAE - WA3HDK reported that despite press troubles and mailing mixups, the April issue was out on time. So far the cost is averaging \$30.00 per issue with \$154.00 in and \$156.00 out. Bob also reported that the QUA-RAE had been invited to enter a publications contest for 1971 and that three good 1971 issues were entered.

CD - W3KPM reported that the Welfare Test would be April 28-29 at Northwestern High School in Albion. The communications link to be provided by the RAE will be set up between 6-11 PM on Friday (the 28th). Tom also reported that all recent RAE leases were in the safety deposit boxes.

REPEATER - K3MAU reported that the tower at the receiver site is up and that the shed has been leveled. A list of contributors to the repeater effort follows:

Pennsylvania Gas Co. - dug hole for electrical lines.

Erie Sand and Gravel - Concrete.

Pyramid Industries - 150 feet of plastic pipe.

Erie Tech - 150 feet of #8 wire.

Phil Ehrman - locks and keys.

First National Bank - full sized door and casing.

Hamilton Lumber - discount on lumber bought.

The secretary was instructed to write letters of thanks to each.

AUCTION - WA3HDK read the rules for this year's auction and reported that \$13.00 was spent on postage for flyers. After some discussion about door prizes at the auction it was moved by WA3HDK that "the auction committee spend \$15.00 on door prizes on which tickets will be sold for 50¢ each." Second from WA3SN, voted on and carried. K3QHO displayed a fire extinguisher which will be sold at the auction for the benefit of the repeater committee.

ACTIVITIES - The following activities were listed. April 8 - Auction; April 16 - Transmitter hunt 6:30 PM April 20 - RAE activities at Naval Reserve Center; April 28 - Welfare Test.

OLD BUSINESS

There was no old business when called for by K3QAY.

NEW BUSINESS

A discussion concerning mobile activities was led by K3VLP and WA3HSR. It was moved by K3VLP, "That the RAE form a Mobile Activities Committee to coordinate mobile activities for local hams." Second was from WA3SN and carried unanimously. Transmitter hunts, OM Truck preparation, and ARCC drills are to be handled by this committee.

(continued on page 3)

K3NAU requested for repeater users and others not to mention the receiver site location over the air by name and let SW Erie suffice. W3ENP (Red Cross Station) not be used until further notice as it was expired and needed renewal.

K3QAY reported that WA3HPW, Jim McCray was in room 534 at Hamot and would appreciate get well cards.

WA3HDK advised that the Sunday column chores had been divided between K3NAU and WA3HSR and that all info should be channelled to them.

A motion for adjournment was heard at 9:14 PM by K3VLP and was carried. There was 22 members and 1 guest present.

Respectfully submitted,
(Signed) Michael D. Hall,
WA3HSR, RAE Secretary

WA3EZR - Recently had QSO #93 with WA3KOJ at Leechburg, PA. Quite regular schedules which started when both were Novices, 6 yrs ago.

K3NAU - Charlie B did a little 'horse tradin' at the Dayton Hamvention.

WIAW SCHEDULE

WIAW transmits code practice according to the following schedule. Approximate frequencies are 1.805 3.58 7.08 14.08 21.08 28.08 50.08 and 145.588 MHz. For practice purposes the order of words in each line may be reversed during the 5-13 wpm transmissions. Each tape carries checking references.

Speeds	Local Times/ Days	GMT
10-13-15	7:30 PM EST dy	0030 dy
5-7 1/2-10- 13-20-25	9:30 PM EST SnTThS	0230 MFSn
5-7 1/2-10- 13-20-25	9:00 AM EST MWF	1400 MWF
35-30-25- 20-15	9:30 PM EST MWF	0230 TThS
35-30-25- 20-15	9:00 AM EST TTh	1400 TTh

W3GWT - Chuck has received recognition in the national publication Dan's Review for his use of Ham radio hobby while commuting to work.

Please add them to your roster

MEMBERSHIP UPDATE

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6216 Raymond Court
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838-4852

R.A.E. Ham of the Month

CHUCK MANROSS - WA3KAI

Just how many persons have become interested in amateur radio through the citizen band radio service is unknown, but this month's HAM OF THE MONTH - Chuck Manross, WA3KAI - is one. The RAE is proud to have him join our amateur ranks.

Chuck says he really got interested in amateur radio shortly after he picked up a flier at Mace Electronics advertising our code and theory classes. In short order Chuck had his novice license. He soon advanced to general class in '67, but wasn't satisfied until he once again went back to Buffalo for the advanced ticket.

When he first got his ticket, Chuck had no amateur gear but, after a few telephone calls and a couple of visits to some local hams to buy equipment, Chuck was on the air for the first time. His DX 100 came from John Gebler, and Dick Shreve parted with his NC-200. Chuck soon found CW to be to his liking. He has just completed a heath electronic keyer. His shack also includes a HW-100, and he is starting to work on some teletype equipment.

Chuck's neat and orderly ways were good qualifications for his being chosen to be the R.A.E.'s secretary for 1970. He is responsible for the art work in the club newsletter. A man with adept hand at drawing and sharp eye is an asset to any periodical and he is one reason that QUA-RAE receives so many compliments. He has also been elected and is presently serving as a member of the Board of Directors of RAE.

Chuck Manross is one of the many behind-the-scene men in the RAE who keep things running, and running well. On behalf of the R.A.E. a big pat on the back and thank you, for a job well done.



Photo and story by
Charles A. Bliley.

WHERE DID I GO WRONG

BY

C
HARLIE

W
HISKEY

When you have the misfortune to be bitten by the Ham Radio Bug it doesn't look too bad at first glance. And to be honest it isn't. An elementary knowledge of electronics in so far as it pertains to a low power crystal controlled transmitter, some knowledge of F.C.C. Regulations, and the ability to send and receive Morse Code at a speed of 5 wpm or, to be exact, 25 characters per minute. In fact, it looks so darn easy very few would be Novices realize that they should contact a veteran Licensee as soon as they realize they're hooked!

It was SO easy to go wrong. I had to learn the code and by hunting around I found a chart that told me a dot and a dash denoted the letter A; a dash and three dots denoted the letter B; etc., etc. I was in such a hurry to go wrong that in less than a week I had learned a series of dot and dash combinations that covered the entire alphabet and some punctuation marks! And so, armed with all this knowledge I started looking around for a licensed amateur to give me a clue about the rest of this game. Like, for instance, something to make a noise with so I can put my dots and dashes to work.

Now I was on the right track -- I was looking for a licensed amateur to help and advise me. The only trouble was that I was about a week late in looking for guidance. In amateur radio, help and guidance are as near as your nearest

licensed amateur and if I had sought and found one to advise me, I'm sure I would never have been advised to learn the Morse Code by memorizing a series of dot and dashes.

In any event the damage was done! But it was not apparent as far as the Novice test of 5 wpm was concerned. And so another Novice was on his way to the enjoyment of a fascinating hobby in a sea of friendly helpful people. However, that first mistake of memorizing the Morse code as dots and dashes lingered on and as the struggle to attain a speed of 13 wpm became harder. THIS Novice knew very well where he went wrong!

Like most articles this one has been written with a hope that it will be helpful to those who follow. I can only tell you that the code must be learned by the actual sound of the dits and dahs and not by memorizing the dots and dashes. All you budding amateurs pay heed. And if you hear of an aspiring would be Novice warn him well and warn him early that sound is the best way to learn the code--not memorization.

Oh! one more thing. I have truthfully stated that our Erie Amateurs are very helpful and cooperative but some where in this great country of ours there are many who are not. I know this because when I tried to tune in on the WJAW Code

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Where Did I Go Wrong (continued)

Practice Runs. The frequency was jammed at that time and yet at other times it was comparatively clear. It's really too bad because by being handicapped by these jamming tactics in his daily efforts to copy code, the beginner finds it much more difficult to acquire the needed proficiency. Another strange thing is that since these transmissions have been moved from the .20 Kc slot to the .80 slot in the various Bands there is less interference despite the fact that there are more Hams eligible to use the new frequency than there were to use the old. Does this mean that those "Top" amateurs - the extras - think they are good enough to flout the rules?? No, not all amateurs are snobs but enough to make it uncomfortable are. How 'bout you. Been causing any gud interference lately?

PRACTICE IS KEY TO CW PROFICIENCY

When I decided to seriously try to become a HAM in 1945, I knew the first thing which I had to hurdle was the CW. I had known the code as a teen ager, some 30 years previously. I think this helped a lot at this time.

My first purchase was a Code Course record by Eico, which would put out from 3 1/2 to 16 words per minute. This helped to get familiar with the code again. Next I got my first receiver, a Heath kit GR64. I soon was able to pick out the CQ's, etc., and eventually found out about the WIAW code practice sessions. Many hours were spent "copying" every letter I could write down. After a time they started to make some sense. Five words per minute became a reality and the Novice test was passed under the watchful eye of WA21OL, Ed Little of Ripley.

A DX 60 was purchased and assembled and contacts were made - the first one with Rich, W2ULY, now known to all of you as WA2BCA. The next contact was with a

station in Oakland Maryland and I was hooked for good.

I think I qualified for the Rag Chewer's Club often in those days be spending at least a half hour (at 5 words per minute) trying to convince my friend at the other end of the QSO that NORTH EAST was really the name of my town and not a section of Pennsylvania.

The General ticket and 13 words per minute seemed beyond the reach of this 46 year old kid. However, in less than a year and after many QSOs all over the States (most all on 80 meters) I gained enough confidence to go down to Buffalo and take the test. I managed to make it the first time. If I had not I guess that would have been the end for my Ham career.

The thing which helped me the most to gain speed in CW was regularly copying the practice on WIAW. I would always listen to about 5 words per minute more than I could copy comfortably and always would write down each letter I heard. It was only one now and then at first but gradually I found the copy going for many words without a break. So if you are having trouble with CW, copy the practices regularly as I did and in due time it will come.

The first 4 years I was licensed, I used CW probably about 90% of the time and had many FB QSOs. I still work it some and enjoy it.

WA3EZR, Bernie

WA3COS - Dave has been doing some cave exploring in West Virginia during his spare time.

K3NAU - Chuck enjoys installing antennas on high towers, so if you need help...

K3PLV - Craig has been busy keeping WA3GNV going. Looks like he might be a new EC.

WA3QVC - Chris hopes to make a trip to Buffalo soon for that General.

CW FOR TRAFFIC NETS

Morse code is the darndest thing. It's not easy to learn, but anyone can learn it with practice and perseverance. It's like learning a new language. It's like learning to ride a bicycle: once you've learned how, you will never forget it; it will always come back with a little practice. It can be music to one's ears (surely there is music in a good signal). It has rhythm and a pleasing tone. It can do an amazing job of communication, coming thru when other systems fail. It is a universal language; Morse code is the same the world over.

The best way to learn the code is to attend RAE's code classes. It's a tremendous incentive to be with people who have the same interest and goal as you do. Also get a copy of "Learning the Radiotelegraph Code," which is available for a nominal sum from the ARRL, and go thru the lessons and practice material it contains.

A good source of practice is the transmissions sent daily by W1AW, the ARRL HQ station, on many frequencies and at various speeds, beginning at five words per minute. Information about these transmissions is given in every issue of QST. (Ed. Note: See schedule on page 3 this issue)

When you've progressed to ten wpm, you can try for the ARRL Code Proficiency Award - a handsome certificate issued to those who submit one minute of perfect copy made during qualifying runs at times announced in QST.

Once you have passed thru the Novice stage and earned your General, you may want to put your skills to use and attain further proficiency. One way to do this is to participate in a traffic net. This carries a double bonus: an increase in proficiency along with the performance of a public service. The Keystone Slow Speed Net (KSSN) meets daily during the winter months, Monday thru Friday, on 3585 khz 5:30 EST. The net is discontinued during the summer months. Listening a few nights will fa-

miliarize you with the procedure and provide you with enough "nerve" to venture your first check-in. When you feel at home on the KSSN and the speed used seems a little slow to you, it is time to move up to the Western Pennsylvania CW Traffic Net (WPA), which meets daily also on 3585 khz at 2300 GMT (7:00 PM EDT). From there, you can undertake liaison with the higher nets: the Third Regional Net and the Eastern Area Net. Finally, you can attain the highest echelon of crack operators, the Transcontinental Corps.

W3LOS - Leo Weiner

FROM THE CW LOG

C.W. (Radiotelegraphy) proficiency is required of all U.S. radio amateurs by the F.C.C. reportedly because of international agreements that the United States has made.

About the best excuse for c.w. put forth is that a "straight-key" is the cheapest modulator available. It is also generally recognized as the method most likely to get through under poor conditions. Under bad aurora conditions on the high bands c.w. (and slow c.w. at that) is the only radio propagation technique that can be readily used by hams. Many of the early contacts made over difficult paths such as the original Ham moon bounce communication used c.w. which at that time upon return was buried in the noise level.

One of the more satisfying stories coming out of Ham activities in WWII was reported in "QST". A bomber flying over Germany couldn't understand the direction changes being sent from London via a.m. because of the Germans' effective jamming of the frequency. Fortunately, an amateur riding as a tail gunner noted and was able to read course change directions coming via c.w. and it was copiable through the jamming. He relayed this information to the pilot. The plane's regular radio operator had not had any experience copying through ham

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From The CW Log (continued)

band QRM and had not even noted the c.w. mixed in with the jamming.

A great deal has been said about ways and means of learning the code and then increasing copying speed. As in learning any skill, practice and the compulsion to succeed are prime requisites. The speed with which many novices upgrade themselves to General Class licenses (and better) already confirms this generalization.

Most authorities recommend frequent short practice sessions rather than long sessions such as the military was forced to use during WWII. Sessions of up to 30 minutes seem to be most efficient in producing copying speed for total time spent in practice.

There are two extremes in copying technique used by active hams. The "letter by letter" technique used by all beginners and the "sit back and listen" technique used by many of your top c.w. hams. This second group rarely writes anything down except notes for comments as done by many phone operators. These operators just hear the words as they come out of the earphones or speakers.

There are gradations between these extremes and while it is great to be able to just listen, to be a good c.w. operator, an operator must be able to "copy behind". All the better operators do that.

One of the best stories about "copying behind" relates to Thomas Edison when he went to work in a Boston telegraph office. He had the appearance of a "hick from the farm". To play a prank on this young kid (early twenties), they put him on the fast press line from New York City. When the speed king in New York asked if he was ready, Edison signalled him to go ahead. Then, with the sounder going wide open, Edison started to sharpen his pencil, letting the New York operator get a flying start on him. Edison was way behind before he started to write in that "near printing-no flourishes" handwriting he had developed for

high speed copying. Before long, he was only a few words behind the New York operator and making beautiful copy.

After awhile the New York operator began to falter. In the past he was used to having the Boston operator ask for repeats, eventually to ask him to slow down. As his sending became more erratic, Edison broke in and asked, "Are you getting tired, Sonny?" This was too much for the New York operator who turned the circuit over to another operator to finish the news.

The Boston office was elated because at last they had someone who could handle that New York speed demon who had been ribbing them for some time.

It had not always been that way for Edison. At one time in another office he rigged up some apparatus to record the press reports at one speed and repeat it at a lower speed. Edison and a fellow operator used this technique for quite some time before they were caught at it - when they got too far behind.

Oddly enough Edison preferred copying press because he never could send as well as he wanted to send.

"Grossy", W8BKM, is one of the more avid C.W. operators in this area. C.w. is just a second language to "Grossy". Years ago when the Atlantic Division convention was held in Erie, "Grossy" and A.C. "eck" (W3GEG until he made "silent keys") were too good for the sending machine for they were still getting solid copy when the machine hit its top speed which was around 50 w.p.m.

One of the top YL c.w. operators in Erie was Beth Rosenberg, the late W3NJJ's XYL. She had a machine-like "fist" and could listen to c.w. while doing house work. On one occasion it is reported that she deliberately dropped out of a code copying contest to avoid embarrassing some Chs.

Another area YL with a "fist" that is a pleasure to copy is WA3KAT. Two other

(continued on page 9)

area "fists" that are easy copy are W3HFD and W3LOS. But Leo's machine perhaps should not be called a "fist" since he uses a keyboard. We might better call it a "touch".

In his tips for operating in contests, Katashi Nose KH6IJ noted that he holds his pencil in his hand while sending (probably a "bug") so as not to waste time picking the pencil up after each transmission. Katashi who can take 60 w.p.m. in his head does his logging while his next QSO is calling him.

If you copy on a typewriter, you might want to use a suggestion made years ago by W1EOB who used a roll of adding machine tape in his typewriter. He got 5 words to the line which make for easy "check" counting. And he didn't have to thread his typewriter very often.

The late W3KLD, "Doc" Sheldon, developed an interesting skill while working as a ship's radio operator on a coastal ship. He learned to touch type one handed with either hand thus freeing his other hand for filing messages or adjusting the equipment.

When some of the old "land-line Morse" operators get on the air and send the Old Morse Code with its spaced letters, they certainly make you think you've gone crazy or something. The late W3GEG a one-time Atlantic Division Director, and W3GJY, our ex-SQM, were heard doing this on occasions. We suspect "Grossy" W8BKM has been guilty of this on occasions too! Do you use your side-swiper on Morse too, Grossy?

One stunt not heard in recent years is back wave keying. This takes some fancy coordination and only some high school c.w. hot shots were noted using this technique. The trick is to hold the key down and raise it up for long and short durations to form the code by what we normally consider spaces. It isn't known whether it is legal or not but it ought to be illegal because it surely sounds chaotic.

Just when some other clever lads developed a feel for copying this upside down sending, our heroes started mixing regular sending into their exchanges and left everybody out in the cold.

The height of cock-sured-ness ever noted before an F.C.C. examiner was exhibited by the late W2AE when he took his Amateur Extra First Class code test. Bob sat there with cracked corn cob pipe in his face and calmly counted off 100 letters and then set his pencil down and leaned back to relax. The Radio Inspector told him he ought to copy a little extra for a safety factor but Bob answered him it wasn't necessary. He got his ticket.

In days gone by when road traffic was sparse, many of the hams had straight keys strapped to their steering columns and connected to their car horns. Out on the open road they got away with code exchanges but downtown the cops told them to cut it out.

BREAK-IN KEYING

One of the greatest aids to satisfying CW operation, whether for traffic work or for rag-chewing, is the use of break in: being able to hear the station you are working instantly if he should want to interrupt your sending. How frustrating it is to transmit for several minutes and then to hear: "SRI OM QRM ES MISSED ALL." For complete break-in it is necessary to disconnect the antenna from the receiver while the key is down and to key the VFO (best accomplished by using differential keying, which turns the VFO on before turning the amplifier on, thus eliminating the chirp which usually occurs when the VFO is turned on and off). The electronic transmit-receive switch, muter and side tone oscillator used with complete success at W3LOS are described elsewhere in this issue of QUA-RAE. Differential keyers are described in available literature, the one in use at W3LOS having been described in QST for February 1959.
Leo, W3LOS

See TECH-PRINT tear out between pages 10 and 11 - ED.

NOBODY has to be lonely!

The New York short-wave radio amateur was chatting - in Morse code - with a fellow "ham" hundreds of miles away. The dot-and-dash discussion centered on their favorite topic - amateur radio.

"I talk shortwave with people all over," the New Yorker was tapping out. "All kinds of people. Nowadays, nobody - repeat nobody - has to be lonely."

"If it means so much to you," came back the answer, "why not get yourself a better set of headphones? From your description, don't see how you hear at all!"

"Can't hear with them," the New Yorker tapped back. "They're too old. I read your message from the vibrations the phone makes against my head."

In the clipped argot of the ether, he went on to explain that he had learned - to read code entirely through vibrations and had used those same headphones when he passed Federal tests to become a licensed operator.

There was a short silence. Then the distant "ham" came back: "Still don't get why you use those headphones. But agree on loneliness - no need for it. Make all my friends these days via short wave, myself. Can't get around much. Lost both legs in the war."

There was another pause over the circuit then the New Yorker answered: "Handicapped here also. Explains reason for earphones. I'm deaf, mute and blind."

From Reader's Digest
By Will Oursler.

WA3EZR - Bernie enjoyed a number of DX contacts the last week end of March during the Contest worked 16 countries including a couple new ones, Norway and Israel. Worked all but one Continent one day.

W3PIX - Dick has joined the Ranks of 2 meter FMers.

SSB Sale, Swap, Buy

FOR SALE: Motorola McCom 30. 10 watts output. xtaled for 34/94 and 94/94
Chuck Smith, W3ZLO, 868-3138

FOR SALE: GONSET G-76 Receiver and AC supply \$100.00. WA3HJC Wayne Robinson ETN3, USNCS Adak, Alaska, Box 10, Dorm J, Cube7, FPO Seattle, WA 98791

FOR SALE: Late model Swan 350 with side-tone, 100 Khz calibrator and speech clipper built in. With 110 volt AC supply. \$325 firm. Charles A. Bliley, 866-1132.

FOR SALE: Mod 19 Teletype machine. Good condition. Fred Shetler, K3VAS, 223 N. Tenth Street, Indiana, PA 15701.

FOR SALE: Hammarlund HQ-110, Heathkit Apache TX-1, Knight T-60. Key and Mike and some accessories. Bob Hooper. 866-6516.

FOR SALE: Hammarlund HQ-160 General Coverage receiver, \$145. Heathkit Harauder HX-10 SSB transmitter, \$150. Both clean. From estate of late W2EXX. Contact Bob, WA3HDK. 725-9226. SR4 - XMTR/LINEAR S&L

FOR SALE OR TRADE: Heathkit HW-22A. Want AC-DC Swan power supply. Robert E. Bair, WA3HDK, R.D. 7, Station Rd. Erie, PA 16510. 725-9226.

WANTED: SBE-34. Sid Root, W3GZN; QUA-RAE.

WANTED: 40' to 50' telescoping Mast, TV type K3USC, Brian Hemmis, 2227 Eastern Avenue. 899-3270.

WANTED: 2 meter FM transciever. Will consider transmitter strip or complete transmitter. Bruce Santelle WA3PUI, 3218 Perry St., Erie, 16504 456-7384.

WA3HRJ - Jim is back home after another stay at the hospital. We look to hear him a little more often now.



TIPS FOR CW PRACTICE

Use a straight key until you can send a solid 15 WPM or so.

Practice with a "bug" or keyer off the air until you become proficient at it. Don't inflict your lack of skill on the station you are working.

Be wary of electronic keyers; they are not always the panacea they seem. They have a way of sending "m" instead of "k", "6" instead of "b", or "n" instead of "d".

If you try to send them too fast, and make many mistakes, your actual sending speed in good WPM can be much, much lower than what your bug is set for. Slow down, then, and make it easier on yourself and on the ulcer of the ham you are working.

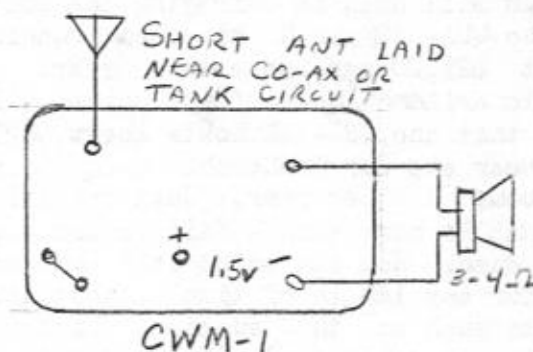
Practice copying material sent a little faster than you can copy comfortably.

Practice copying behind. Wait until an intervening word has been sent before writing anything.

But...Without persistent regular practice, none of these can help.

Morse code is the darndest thing. Guess ya just gotta like it. And I like it!
Leo, W3LOS

Joe Metz, WA3MAU says his favorite side tone monitor cost him \$3-4. It is a potted unit about the size of an ice cube. If you want to go solid state try this one. He picked it up at Duncombs. You can also build only the side tone generator from Leo's (W3LOS-page 9) if you like tubes better.



Also see WIRELESS CW MONITOR, Electronics illustrated, July 1968. -ED

W3ZLO - Ever since the repeater receiver has been moved to the new site, Chuck is singing that favorite toothpaste jingle, "you'll wonder where the signal (yellow) went when you..."

K3PLV - Craig found the 10-meter transmitter first in April. He'll be "it" May 21.

RAE Membership Application

Call sign _____ Class _____ Dues \$1.50 per year

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ ARRL? Yes _____ No _____

Members receive QUA-RAE as part of their membership. Don't miss an exciting issue. The membership term is from January to January. Join now while you're thinking about it.

The second answer is what is known as the "talkback" repeater. The Talkback repeater has .94 (or other common repeater output frequency) input, and uses an unused low-channel frequency, such as .26 as an output frequency. This enables anybody with a two-meter receiver, especially mobile stations, the capability of hearing anybody on the input frequency within range of the talkback repeater. This effectively gives anybody who wants it a mountain-top 2-meter site.

Thus Arizona, as well as most of the other mountain states, is far ahead in the 2-meter communications field as far as the amount of coverage is concerned. Maybe some of the techniques used here can be modified to give better coverage to the repeaters in the rolling hills of the East.

--Ronald J. Jakubowski, K3VXE/7

REPEATER DONATIONS LISTED

As of 4/14/72 the repeater receiving, control, voting, and identification equipment has been successfully moved from the original site in my garage to the new receiver complex. In order for us as a club to build such a professional, sophisticated complex the help of many outsiders was donated. These donations were both time and materials donations.

REPEATER MEMBERSHIP REPORT RELEASED

The membership list of the two meter FM repeater group is continuing to grow by leaps and bounds. In fact, there are days when there is so much activity on the machine its beginning to sound like twenty meters. The following are paid up members through the month of April:

W3GHT, W3SN, W3UCZ, W3MED, WA3EAY, K3ZGG, W3STK, W3ZLO, K3NAU, W3AQY, W3PJD, WA3AWB, K3ATZ, K3NFM, K3AXS, K3QAY, and K3WTZ.

For those who are not familiar with the financial end of the repeater operation, dues are two dollars per month, payable to six months in advance. These monies go only for the expenses of operating and improving the W3ZLO two-meter repeater and really only cover part of the expenses incurred so far because many dollars and much equipment has been donated. If you would like to add your

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Some of the donations outside of those already made by some of club members themselves are listed below. With their help, the receiver complex would not be operational today.

Our hats are off to these people for their extreme generosity and, again we all say thanks for the help.

K3WTZ, Bob
Receiver Site Chairman

NAME	FIRM	DONATION
Al, K8EUR	Antenna Specialists	Antenna
Jim Fisher	Erie Sand and Gravel	Concrete for tower base
Bill Dear	Hamilton Lumber	Discount on material
Mac, W3AQY	First National Bank	Building materials
Phil Ehrman	Locksmith	Keys and lock fitting
John Harrington	Cuyahoga Falls, Ohio	Plastic pipe for underground
John Barry	Pyramid Plastics	Plastic pipe for underground
Roger Iusk	Erie Technological Products	Electric wiring material
B. Johnson/S. Miller	Bliley Electric	Installed Electric service
Dick, W3NFM	General Telephone	Dug ditch for electric service
Frank Kenry	Pennsylvania Gas	Dug hole for tower base
Fred, W3UCZ	Byrd Plastics	Trucking, three times

FLASH - FLASH. The new call for the repeater has been received - WA3KXD

PREZ SEZ

All of the club members owe a word of thanks to the Auction Committee and workers for a job well done. There were a lot of goodies on hand and the prices paid were good. The income received will help in defraying the costs of the QUA-RAE which has been running about \$25.00 per issue this year. A little arithmetic at this point will show that the QUA-RAE costs about \$250 per year and our membership dues bring in about \$180 per year. Just receiving QUA-RAE is more than a fair return on your dues. How can we do it?? We can not for any length of time without more events such as the auction, hamfest, picnic, or other fund raising functions. We need every member's help and participation in our activities to remain successful. We may also find it necessary to be more realistic in our dues in order to continue the service QUA-RAE renders to each of us.

I heard a complaint again on the Club's most active project, the repeater. Some members feel that entirely too much emphasis is being placed on this project to the exclusion of some other un-named project or interest. If you have a Club Project and you want to get help and publicity, organize it and start on it. Don't complain because someone else has a well organized and publicized project which the Club is proud to support. They would not have been successful if they had spent their time complaining or finding fault. Every project must have a responsible leader and some dedicated workers. We need more projects and I am sure the club will support your efforts in every way possible.

Many clubs have fund raising projects such as the selling of printed circuit boards of assemblies. If you missed the business meeting on April 6, 1972, you missed seeing how easy these boards can be made. Bob Smith (K3WIZ) and I volunteered this program because one club member requested it. We need more members to volunteer Tech Talks or programs and thus make our meetings more

informative and enjoyable. We also saw the Tulsa Repeater slides which were enjoyed by all present. You can help your Program Chairman, Chuck Smith (W3ZLO), by suggesting or arranging with him to have programs on the subjects you are interested in. He needs your help as well as complaints in order to do a better job and have programs covering everyone's interest.

73 "Browmie" K3QAY

THE CARE AND FEEDING OF REPEATER; WESTERN STYLE

"WA7LYA mobile, Phoenix, this is WA7PFZ Douglas, WA7KYT---shht----chunk." Not too much different than normal 2 Meter FM operating with today's repeaters you say. However, Phoenix and Douglas, both in Arizona, are no less than 200 miles apart. And what's more, no station is running much more than 150-200 watts out as a repeater. What's the secret? Its very simple--height. Most repeaters have a mountaintop site between 6 and 10 thousand feet above sea level, and between 2 and 5 thousand feet above average terrain. Most of the major cities--Tucson, Phoenix, Flagstaff, etc. are in a valley with mountain ranges on the east and west, with the north-south path free of major obstructions. Even with the great repeater sites, however, the person on one side of a mountain cannot hear a mountaintop repeater 200 miles away over several other ranges without assistance of some kind. This assistance is handled in two ways.

The remote base station is the first answer. The remote base is a 2-meter transceiver, usually putting out close to 100 watts which is controlled by and linked with the control location by 450 MHz. The 450 uplink modulates the remote base, and the downlink (on a separate frequency) brings the receive audio down from the mountain. The remote can be controlled either by Secode or touchtone on the uplink or preferably on a separate control frequency.

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Repeater Membership List (continued)

call to the list of active members, send your dues to K3ATZ, 4575 Southers Drive, Erie, PA 16506

The treasury balance for the repeater group is \$139.84 as of April 14, 1972.

Chuck Lewis, K3ATZ
Acting Treasurer

WA3LSY - Rick was hidden 10-meter transmitter last month.

W3HLM - Don wasn't quite quick enough on the trigger. He came in second in the 10-meter transmitter hunt.

WA3EZR - Bernie has volunteered to see that someone writes some strays. I think he's going to have a unique way to do that.

W2CFP - Dave of ECARS fame was heard on our repeater while passing through on April 23.

LETTERS.....from our readers

Hi

Here is my dues money. Cannot get to any meetings cuz I work second shift. Use the rest of the check for the paper or whatever you need it for. 73 S

Andy W3TLA

Hi!

I still want to get the news of Erie hams - an excellent paper. So here are my dues. I've been working in New York City for the past 15 months - plan to eventually get back to Painesville so I'm keeping the W8 call. Been too busy to do any hamming but this summer I get a 4-week vacation which I'll spend in Painesville with a visit to Erie. Plan to get on the air then. If it isn't too much trouble send the monthly newsletter to the New Jersey address. 73

Howard K8UMS

WHERE THE ACTION IS

Now that the weather channel (162.4 Mhz.) is in operation at the Erie International Airport, it is much easier to get the low-down on the weather. Also with the addition of this new facility is the installation of the radar-navigation aid which will assist many craft in landing at the airport in foul wx.

On May 18, the Radio Association of Erie has been invited to tour these facilities at the airport. With limited space available, we have been asked to do this by reservation only.

Those wishing to attend the tour may call Chuck Smith at 868-3138 any time of the day or evening. If you prefer, state your request the next RAE meeting.

Remember June is field day. Get your band assignments before it is too late.
--73, Chuck

W3LKH - Jim is looking for help in getting back on the air after an extended illness. His phone number is 725-3910.

THE FINAL FINAL

Well, things went a little smoother this month--for the first time since I began to edit QUA-RAE. I am personally pretty well pleased with the way things are going again. I've got a few gripes but will save them until the good things have been bantered around.

The auction is now history. We had a nice crowd and the best year since I have been involved with it. I will have a full report for the May business meeting but it is rushing things a bit to have it ready for this issue of QUA-RAE. We were disappointed that our "crack" auctioneer, Carl McCary came down with the flu. Our "spare" auctioneer could not make it either, so Charlie, W3ZLO, Charles, K3NAU, and myself were able to
(continued on page 15-16)

Final Final (continued)

keep things going. (not as well as we had planned, but, after all, we're amateurs) I have not tallied the total sales, since it has only been a week since I picked up the balance of the records from Mike, WA3HSR. From the deposit that we made that evening, though, it looks like we will have about \$150 to split between the newsletter, the repeater and the general treasury. Look for the report in the minutes of our next meeting. TO ALL THOSE WHO HELPED--K3KPM, K3QHO, W3STK, WA3KAI, W3ALD, WA3JIS, K3WTZ, K3VLP, and all the kitchen help--our sincere thanks. (I've tried not to let anyone out but if I did, I'll try to make up for it in the regular report.)

On the subject of staffing, we welcome this month Bernie, WA3EZR, who has taken the obligation to make certain that some one will supply a sufficient quantity of STRAYS. He hasn't had a chance to start looking yet, but don't be surprised if one day he asks you for help.

For several months now, I've been omitting a couple of names from our staff list. - George Dickey, Jr. and his YL friend, Kathy has been helping to put the paper together and mail it. Thanks. I've finally given up the idea of finding an editor, so starting this month, we will take the word "temporary" from in front of my by-line. That doesn't mean that the matter is closed, however. If someone comes along who wants to try his hand, I'd be grateful for the offer.

We still need salesmen who can go out and line up a few ads. The paper is costing us upwards of \$30 per issue and the money must come from somewhere.

The newsletter is not as "newsy" as I would like to see it. OUR DEADLINE IS THE 15th OF THE MONTH PRECEDING PUBLICATION--that is May 15 for the June issue. Can't you, just once in a while, take time to drop us a note and tell us what you are doing. I will try to let you know a month or two in advance what our theme for the issue will be so that you will have time to collect your thoughts and submit an article if the

theme is one of your favorites. For instance, the June issue will be centered around mobile operation. Do you have a rig in the car? Have any favorite stories about mobiling? Know something else that one of us don't know? Put it on paper and mail it to me. I'll get it quicker if you mail it to my home address: R.D. 7, Station Rd., Erie, PA 16510. July will cover emergency operation. Please get your stories about emergency operation in before June 15.

Activities planning is causing us some problems again. Publicity for the transmitter hunts was not good and participation was way down. There will be monthly transmitter hunts on both 6 and 10 meters on the third Sunday of each month. WA3HSR, Mike is in charge of general planning. Call him at his home for more info. He has promised to have more details available for us in the near future. Don't forget that Mike and George, K3VLP, have just been placed in charge of a committee to co-ordinate mobile operation. They can use your help. You can call them at home--their numbers appear on the front cover of this newsletter.

Doc, W3YML, forgot about the 15 of the month deadline and so we won't have a column on VHF this month. He did ask me to tell you however, that NCS for the Tri-State Net (6 meters) for May will be Brownie, K3QAY. He also said that no one was out hunting W3ALD when he hid the transmitter last month--Come on now fellas! Doc says call-ins have been averaging 18 for April. NOW COME WE HAVE NO INFORMATION FROM THE 10 METER NET???? How about one of you guys out there picking up the ball and submitting info. How about your net manager assigning someone?

We seem to have trouble lining up activities in time to get publicity. Remember it takes about three weeks to get any kind of local publicity going--and three months to get any national recognition. (even three months did not seem to be time enough for QST to get info concerning our auction. We don't seem to be getting the co-operation we should from them.) Charlie, W3ZLO says he will

• MAY 1972 •

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4 RAE Business Meeting 8:00 PM IC OP AMP	5 TECH TALK FOLLOWING BUS. MT	6 PFV- JUNBERY BERMUDA "CW" CONTEST
7 6-10 NETS BERMUDA "CW" CONTEST	8	9	10	11 Repeater Comm. Meeting 8 PM	12	13 ROCHESTER HAM FEST CONN. QSO PARTY
14 6-10 NETS MOTHER'S DAY	15 CONN. QSO PARTY	16 JUNE ISSUE DEADLINE WAS YESTERDAY!	17	18 RAE Activities Meeting	19	20 PA ARMY MARSHAL MICHIGAN QSO PARTY
21 6-10 NETS XMITR HUNT 6:30	22	23	24	25	26	27
28 6-10 NETS	29  MEMORIAL DAY	30 JUNE QUA- RAE MAKES	31	NOTE: DON'T FORGET FIELD DAY JUNE 25 & 26 MAY 1 BUS. MT.		

have his WHERE THE ACTION IS column in tomorrow, so look for it in the Too Late To Mention section.

Speaking of activities, I was pleased to attend the last repeater committee meeting. One of the most significant outcomes of that meeting was the agreement to hold a regular meeting on the second Thursday of each month at the Red Cross building. Time will be 8 pm. On this first regular meeting, the group will elect officers to fill out the balance of the 1972 calendar year. Those not belonging to the committee are welcome to attend. These guys have worked long and hard on their special project. Why don't you go on down there and find out more about them.

I still know very little about the field day activities. I can tell you they will take place June 25-26 at a new location for us--Bliley's field just off Zuck Road. Chuck Bliley and Rick Craig will have more on this in the next issue

of QUA-RAE. In the meantime, why don't you call Chuck or Rick and reserve a slot.

I have been a little critical of some of our activities in this editorial. Nothing personal fellas, just trying to point out that it takes cooperation to accomplish our goal of making this club one of the best darn operations in the country. You can agree or disagree with this column. It reflects my opinions and not necessarily those of the club. Rebuttal space will be gladly given if you wish.

Things are looking better now than they have since I joined RAE some five years ago. It takes teamwork to make a club grow like ours has. Lets not let our personal ambitions stand in the way of anyone's enjoyment of amateur radio. Join the team and let's make RAE the club with SOMETHING FOR EVERYONE.

73-1303 WA3HDK